

Experiments which I intended when I was about these Matters, nor repeated some of those which I did try, until I had satisfied my self about all their Circumstances. To communicate what I have tried, and leave the rest to others for further Enquiry, is all my Design in publishing these Papers.

In a Letter written to Mr. Leibnitz in the Year 1676. and published by Dr. Wallis, I mentioned a Method by which I had found some general Theorems about squaring Curvilinear Figures, or comparing them with the Conic Sections, or other the simplest Figures with which they may be compared. And some Years ago I lent out a Manuscript containing such Theorems, and having since met with some Things copied out of it, I have on this Occasion made it publick, prefixing to it an Introduction and subjoyning a Scholium concerning that Method. And I have joined with it another small Tract concerning the Curvilinear Figures of the Second Kind, which was also written many Years ago, and made known to some Friends, who have solicited the making it publick.

I. N.

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The FIRST BOOK OF OPTICKS.

PART I.

MY Design in this Book is not to explain the Properties of Light by Hypotheses, but to propose and prove them by Reason and Experiments: In order to which, I shall premise the following Definitions and Axioms.

DEFINITIONS.

DEFIN. I.

BY the Rays of Light I understand its least Parts, and those as well Successive in the same Lines as Contemporary in several Lines. For it is manifest that Light consists of parts both Successive and Contemporary; because in the same place you may stop that which comes one moment, and let pass that which comes presently after; and in the same time you may stop it in any one place, and let it pass in any other. For that part of Light which is stopt cannot be the same with that which is let pass. The least Light or part of Light, which may be stopt alone without the rest of the Light, or propagated alone, or do or suffer any thing

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